NOAA TECHNICAL MEMORANDUM
NMFS-F/SWR-001

AN ASSESSMENT OF COMMERCIAL FISHING FACILITIES AND THE POTENTIAL FOR COMMERCIAL FISHING INDUSTRY EXPANSION IN SANTA BARBARA AND VENTURA COUNTY HARBORS

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DECEMBER 1979

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
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U.S. DEPARTMENT OF COMMERCE

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
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NATIONAL MARINE FISHERIES SERVICE
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INTRODUCTION

In February, 1978, the National Marine Fisheries Service, Southwest Region and the University of California Sea Grant Marine Adivsory Program were requested by several commercial fishing interests and one port authority to examine certain aspects of the commercial fishing industry in the Channel Islands area.

This analysis was intended to identify present harbor and marina facilities used by local and transient commercial fishing fleets, to identify additional facilities needed, to assess the commercial fish and shellfish harvest, and to assess the potential for future commercial fishery development in the study area.

No attempt was made to specifically address recreational boating interests in this study. However, commercial, commercial/recreational (partyboats) and recreational fisheries are often closely associated and recreational fishing has been addressed in this study only as appropriate.

The conclusions in this study are intended to benefit the commercial fishermen, seafood processors, seafood wholesalers, coastal planning authorities and agencies, port and harbor planners, and the ultimate seafood consumer. If this study does little more than convince at least one port planner to identify and adequately provide facilities for local and transient commercial fishing fleets, a significant milestone has been accomplished.

STUDY PROCEDURE

Information was collected for this study by personal interview with leaders of five commercial fishermen's organizations[1], Santa Barbara trawl fleet representatives, several individual fishermen, nine seafood processors and the port or harbor directors of Santa Barbara, Ventura, Oxnard and Port Hueneme. Observations and interviews were recorded during four field surveys conducted throughout 1978 by the authors with the assistance of Regional Coastal Commission and Local Coastal Program staff.

Information was collected at several meetings concerning harbor development and fishery needs of Channel Islands (hereafter referred to as "Oxnard"), Ventura and Santa Barbara harbors. Field surveys and meetings are listed in Appendix I. Examples of survey forms used in this study are presented in Appendix II.

The California Department of Fish and Game statistical records were examined to analyze landing trends, to identify latent or underdeveloped fisheries, and to examine the economic impact of the present commercial fishing industry in this area. An attempt was also made to identify socioeconomic affects that may occur relevant to specific developments in fisheries or harbor facilities.

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1 Pacific Coast Federation of Fishermen's Associations (PCFFA)
Commercial Fishermen of Santa Barbara, Inc. (CFSB)
Channel Islands Harbor Fishermen's Cooperative (CIHFC)
California Abalone Association (CAA)
United Fishermen's Organization of Southern California (UFO)

STUDY AREA

The geographic region encompassed by this study is essentially the California coastal area of Ventura and Santa Barbara Counties, hereafter referred to as the "study area." Ports in the study area are, from north to south, within the cities of Santa Barbara, Ventura, Oxnard and Port Hueneme (Figure 1). The local fishing area consists of the adjacent coastal waters and offshore waters of the northern Channel Islands.

Although not surveyed, the ports of Monterey, Morro Bay, Avila Beach and San Pedro are referred to in this analysis. Major developments in the study area may have an economic impact in those ports.

Using Ventura Harbor as a reference, off-shore fishing grounds for local species extend as far as 60 miles to waters near San Miguel Island and as close as 15 miles to waters near Anacapa Island. Nearshore fishing grounds are coastal waters from Point Conception to Santa Monica Bay. It must be realized, however, that these fishing grounds do not necessarily identify the fishing range of a commercial fishing vessel harbored in the study area.

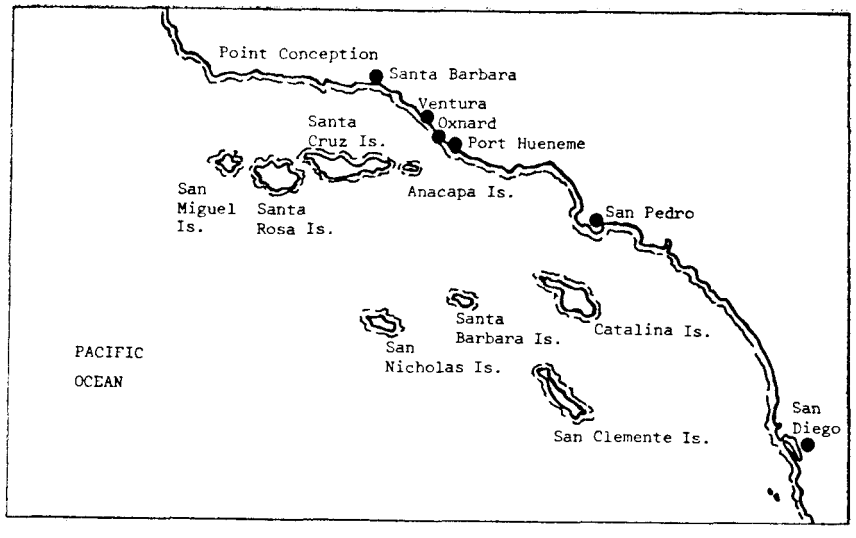

Figure 1. The Santa Barbara/Port Hueneme Study Area

ASSESSMENT OF COMMERCIAL FISHING FACILITIES

Each port in the study area is described individually. An attempt is made to document the political affiliation of the port, the port location, the present marine facilities and any future plans for development. Approximate water distances are shown for each port from San Pedro and Port San Luis which are the next ports-of-call to the south and north, respectively. Berthing rates are recorded as being accurate during the interview, however, some rates were under review by the respective port authorities. Table 1 reflects the present facilities of each port.

TABLE 1 PORT FACILITIES

Facility Description	HARBOR			
	Santa Barbara	Ventura	Oxnard	Port Hueneme
Approximate Water Distance From:				
San Pedro	95 mi.	70 mi.	65 mi.	65 mi.
Port San Luis	125 mi.	150 mi.	160 mi.	160 mi.
Ice	NO	NO	YES	NO
Haul-out	YES	YES	YES	NO
Fuel	YES	YES	YES	YES
Cargo Hoist	YES	YES	YES	YES
Launch Ramp	YES	YES	YES	NO
Live Bait	YES	YES	YES	YES
Coast Guard	YES	NO	YES	NO
Commercial Fishing Boats	164	9	115	17
Party Boats	4	3	10	4
Berths:				
Slips	1,008	700	1,660	20
Moorings	39	20	0	0
Berthing Rates:				
Slips (per foot)	$1.90-2.10 mo.	$2.80/mo	$1.95-2.65 mo.	$1.00 mo.
Moorings (per foot)	$1.00/mo.	$1.00/mo	-	-
Transient (per foot)	$ .15-.35 day	$ .10/day	$3.00-10.00 day	-

PORT DESCRIPTION OF SANTA BARBARA HARBOR

Santa Barbara Harbor (Figure 2) is administered by the City of Santa Barbara under the general authority of the City Council. The harbor is located about 25 water miles north of Ventura Harbor and about 125 south of Port San Luis, the two nearest port facilities.

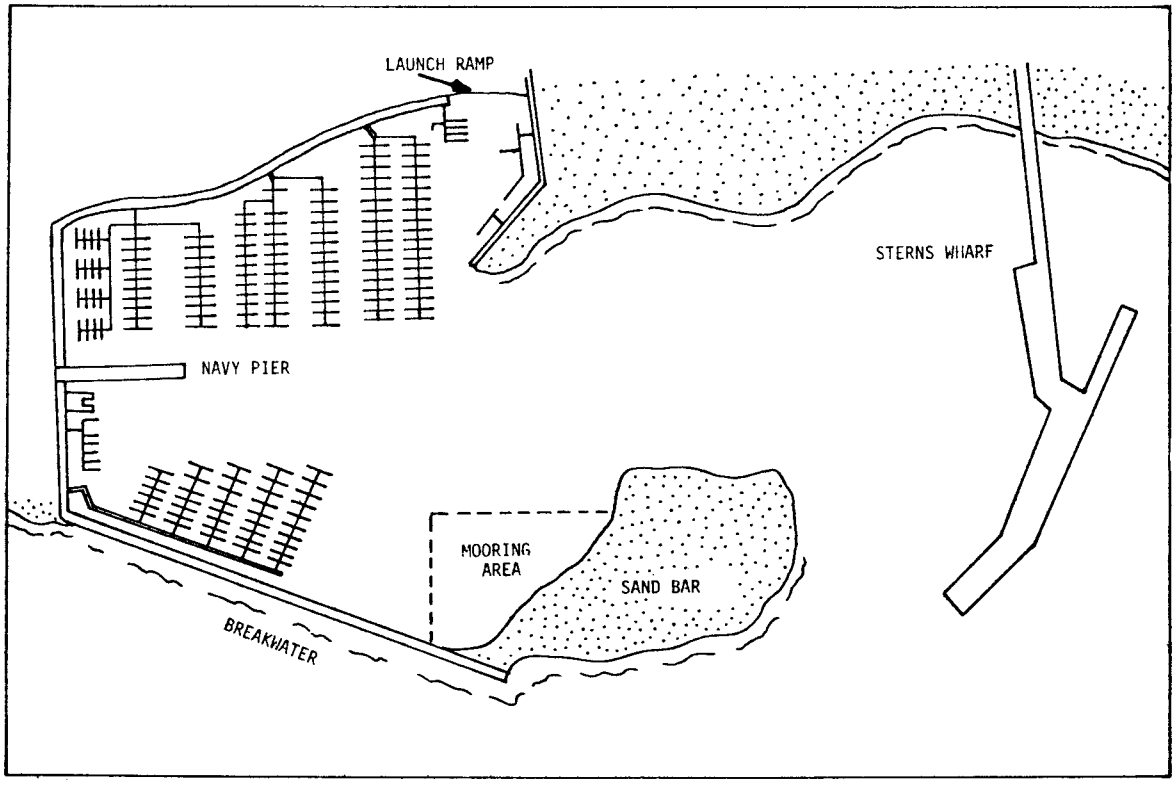

Figure 2. Santa Barbara Harbor

Berthing

The harbor has a total of 1,047 slips, moorings and other tie-ups. These consist of 16 open water moorings, 23 commercial fishing floats and 1,008 end-ties and slips. There are presently 164 commercial vessels permanently moored in the harbor and 33 on permanent visitor (transient) status. The permanent berthing sites are fully utilized and there are long waiting lists. At present, owners of 470 vessels are waiting for permanent tie-ups and, without major harbor development, the waiting list may exceed 1,000 vessels by 1981 (Riley, 1978). Many transient boats, both pleasure and commercial fishing vessels, use Santa Barbara harbor. In 1977, 8,633 transient vessels were recorded, and consisted of 30% commercial fishing vessels.

Berthing rates vary within the harbor depending upon the type of berth. Float moorings are $1 per vessel foot per month and slips are $1.80-$2.10 per vessel foot per month. Slip rates vary by vessel length classifications. Transient fees reflect recent increases and the daily rate is caluclated on a 30 day basis. Charge for the first 14 days is 15¢ per vessel foot per day and for the remaing 16 days, 35¢ per foot per day. For a 40-foot boat the cost for one month would be $308.00. The same boat with a permanent slip would be assessed $80.00 per month. There is no discrimination between pleasure and commercial fishing vessels.

Fuel

There is only one fuel dock which is operated by a Union Oil Company franchise and supplies fuel to all fishing craft. It is located on the public pier, referred to as the Navy pier. Another fuel site, located on Stern's Wharf, is inoperative and will probably remain so.

Ice

There are no near-by ice facilities although a public ice-flaking machine is located on the Navy pier. Its location on the pier is such that it often interferes with loading or unloading operations of other vessels. There is a 50¢ charge to flake a 300 pound block of ice. The machine can process only one-quarter of a block at a time and splitting the blocks is time consuming to the users. Nearly everyone using the ice machine gave a high priority for replacing the flaking machine with a better designed, 300 pound capacity machine.

"Clear" ice is available from two firms in Santa Barbara at prices ranging from $9.00 to $12.00 per 300 pound block. The fishing industry prefers unclear "fish" ice which is less expensive and must be trucked in from Oxnard. The cost for fish ice is $3.50 to $4.50 for a 300 pound block.

Hoists

There are four hoists in the harbor; two privately owned and two owned by the City of Santa Barbara. The city hoists seem adequate for most fish unloading purposes, although heavy loads, such as 1,200 pound bags of sea urchin, overtax their capacity. Every processor interviewed indicated a definite need for one additional heavy-duty hoist.

Harbor Entrance

The entrance to the harbor must be dredged periodically to remove dangerously shoaling sands. Several days out of the year deep draft vessels cannot safely pass through the entrance. Conflicting opinions as to the number of days the entrance is "closed" are expressed by port authorities and boat owners. The willingness of a skipper to risk possible grounding of his vessel is the factor which determines, for

him, whether or not the harbor is "closed." The approximate extent of shoaling is shown in Figure 2. The general configuration of the harbor breakwater has an interesting impact on the harbor once the sand bar is removed by dredging. Fishermen say many of their moored vessels then are exposed to heavy surge during frequent southwesterly winds. A direct effect of the shoaling occurred in November 1978 when an increase of sand deposits actually eliminated the use of the moorings near the end of the breakwater. Several vessels were moved to transient berthing due to the shallow water conditions. A solution to this problem has not been found at this writing. The shoaling of the harbor entrance is the most important immediate problem identified by the commercial fishermen who have permanent berths. Nearly all full-time fishermen have voiced a need for more timely channel maintenance.

Commercial Passenger Fishing Vessels

Four commercial passenger fishing vessels (partyboats) operate out of Santa Barbara. These include one "closed" partyboat, two "open" partyboats and one partyboat catering to sport divers. An "open" partyboat takes "walk-on" passengers while a "closed" partyboat is limited to charter groups only. A fifth "open" partyboat, capable of carrying 120 recreational fishermen, is expected to join the fleet in May of 1979. The new vessel will be 90 feet in length with a 25 foot beam. The vessel will draw 5 1/2 feet of water with steel skegs protecting each propeller. The owner has designed the vessel to cope with frequent shallow water conditions in the Santa Barbara Harbor.

The two "open" partyboats are 56 and 90 feet long and carry 40 and 45 passengers, respectively. The dive boat is 65 feet and carries 49 passengers.

A spokesman for the local sportfishing industry stated that increased demand for spaces for partyboats has led to an upgrading of the sportfishing fleet with an expected four fold increase in capacity by 1980. He states that, "increased passenger loads means increased demand for all services including charter boats, live bait holding facilities, parking, and bait and tackle sales." The new existing sportfish landing was designed to accommodate this growth, but an increase in the number of live bait holding tanks will require four times the water space now used (Riley, 1978).

The spokesman also indicated that the demand for sport diving charters is probably the fastest growing facet of the sportfishing industry. The 49 passenger dive boat in the harbor is sold out for weekday charters for 1979 and for nearly every weekend over the next three years.

Commercial Fishing Vessels

Santa Barbara Harbor has one of the most diverse fishing

fleets on the West Coast. The 164 commercial fishing vessels range from 18 foot gillnetters and 26 foot abalone/urchin dive boats to 50-70 foot trawlers. Between these extremes are various types of combination vessels in the 30-50 foot range. These vessels are used in different fisheries throughout the year, including boats rigged for swordfish, halibut trammel net boats, crab and lobster trappers, sea bass, barracuda and shark gillnetters, hook-and-line rockfish boats and salmon/albacore trollers.

In addition to the commercial vessels which have permanent berthing, many transient fishermen use the harbor as a stop-over or temporary base of operations during different fishing seasons. A harbor survey showed that the number of commercial visitors ranged from 110 to 170 vessels during three sample months in 1977 (Riley, 1978).

The increase in transient rates in 1978 has had an adverse effect on the fishing industry in Santa Barbara. One of the major fish processors depended heavily on the catch of several transient fishing boats, but lost eleven halibut boats, three blackcod boats, one trawler and several hook-and-line boats, which left soon after the rate increase to find space in other harbors. In October 1978, the plant closed down and several other fishermen left because of a loss of this major buyer for their fish, especially underutilized species such as dogfish and blackcod. Facilities in other ports of the study were not considered adequate by the fishermen at this time to attract these boats. The closure resulted in the loss of 30 jobs at the plant (Letter from Old Santa Barbara Fish Company, Appendix III).

Five local fish and shellfish processors continue to unload fish at Santa Barbara from the remaining fleet. Also, two urchin companies and one fish processor from out-of-town use the unloading facilities.

Haul-Out Facilities

A privately owned travel lift and boat yard is located at the west end of the harbor. The travel lift has a 30 ton maximum capacity and can handle vessels up to 16 feet wide and 50 feet in length. The boat yard can accommodate 14 to 16 vessels in the 25 to 45 foot range. The yard allows vessel owners to do their own repairs. A floating dry dock is also available in the harbor for use by one vessel at a time. It has a 30 ton capacity.

Future Harbor Development Plans

The City of Santa Barbara is presently reconsidering a harbor expansion plan approved by the U.S. Army Corps of Engineers in 1967 to develop the harbor. If this Plan could be implemented it would greatly expand the slip and mooring capacity of the harbor through construction of several new and extensive breakwaters.

Santa Barbara could be very attractive to a developing commercial fishing industry for several reasons. Foremost is the presence of fish processing facilities and, with adequate maintenance dredging, it has a relatively safe harbor entrance. Another positive aspect is the publicly-owned hoists, which gives the fisherman a chance to unload and sell his fish to a market of his own choosing. The major expansion inhibitors, as already stated, are the lack of permanent berthing for additional vessels and the high transient berthing rates.

PORT DESCRIPTION OF VENTURA HARBOR

Ventura Harbor (Figure 3), previously known as Ventura Marina, is owned and operated by the Ventura Port District, an autonomous political subdivision of the State of California. The harbor is located six miles northwest of Channel Islands Harbor and about 65 miles northwest of the city of Los Angeles. Santa Barbara Harbor lies 25 miles to the northwest. The harbor is to the immediate north of the Santa Clara River.

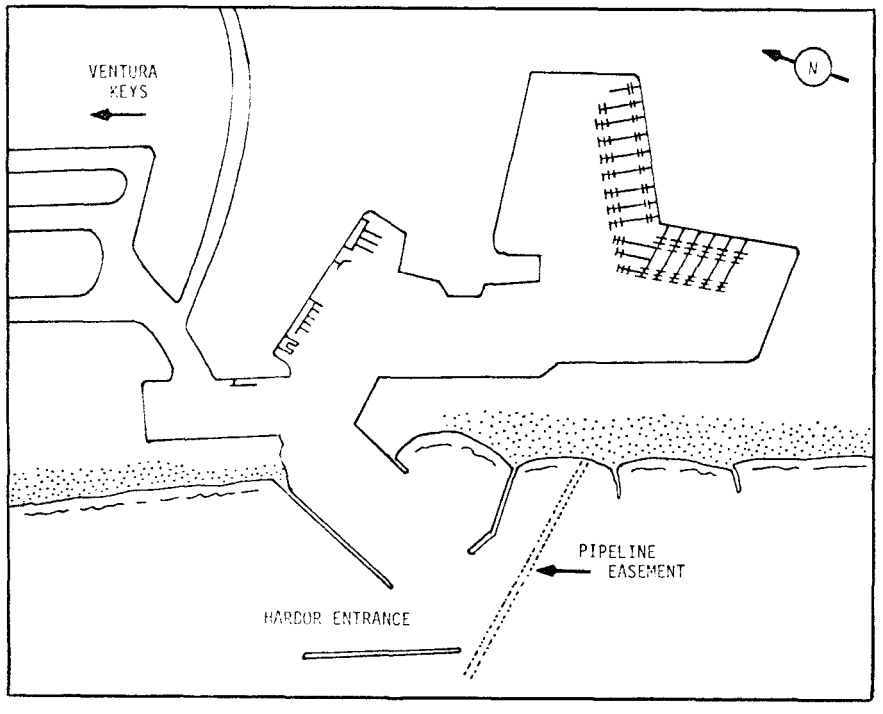

Figure 3. Ventura Harbor

Of all four harbors in the study area, Ventura Harbor has the largest undeveloped water and shoreside acreage. Only one half of the total 200 acres of land and 70 acres of water is developed or leased for development at present. Plans are being made by the Port District to assure the accommodation of both recreational and commercial fishing vessels in the future development of this harbor.

Berthing: The harbor has a total of 700 slips for recreational boaters. Of this total, a privately owned and operated marina has rented about 600 slips and a yacht club has leased berths to 75 recreational boaters. The privately-operated marina charges $2.80 per vessel foot per month to any vessel not engaged in commercial activity. An additional 150 recreational boats are berthed at individually owned docks in the Ventura Keys subdivision adjacent to the harbor. A free

4-lane launch ramp for recreational boaters is located in the northeast section of the harbor east of the sportfishing landing and fuel dock and west of a large undeveloped area.

Fuel: There is one fuel dock in the harbor, located adjacent to the free launch ramp. The Union Oil Company franchise handles both diesel and gasoline fuels with a 40,000 gallon capacity. Harbor administrators have indicated that the present 100 foot dock may need to be expanded to service additional commercial and recreational vessels.

Ice: No ice facilites are presently available although the harbormaster is actively seeking an ice crushing machine to serve commercial fishing vessels. Blocks of "fish" ice are available from an ice company in Oxnard about 10 miles from the harbor.

Haul-Out Facility: The present haul-out facility is located in the north end of the harbor, west of the sportfishing pier. The facility includes a 40 ton capacity travel lift, which can handle vessels up to 15 1/2 feet wide and 60 feet in length. The haul-out site can accommodate seven vessels over 45 feet and about 75 smaller vessels. Harbor administrators have indicated a need to expand this facility in the near future.

Hoist: A one-ton hoist, owned by the boat yard operator, is located on the pier at the haul-out facility. In December of 1978, the owner responded to a request by commercial fishermen and offered the use of the hoist for unloading vessels at a charge of $3 per ton of fish.

Harbor Entrance: The harbor entrance has a northeast-southwest orientation with a 1,500 foot detached breakwater running parallel to the shore protecting the entrances from westerly waves. A combination of shoaling and westerly winds during the winter, have at times, led to dangerous entrance conditions. The 1979 Pacific Boating Almanac states the following about the harbor entrance: "When a rough sea is from a W direction, dangerous breakers often roll into the entrance. Extreme caution must be exercised to prevent floundering under these conditions. This dangerous condition occurs mostly in the winter when the prevailing winds are from the W." The harbormaster has said that storm generated swells, without the wind, can lead to these conditions, and feels that experienced skippers can negotiate the entrance during all but a few days a year.

Because this harbor does not have a natural submarine canyon to facilitate the movement of sand out of the mouth, an 800,000 cubic yard sand trap was developed in 1972 through breakwater construction to ease the shoaling problem. This sand trap must be dredged periodically at a cost to the Harbor District of one to two million dollars per dredging.

The Harbor District is considering the feasibility of

constructing a fixed sand bypass plant to move sand out of the trap. The bypass plant is considered to be much more efficient and less costly than conventional dredging over the long term. By maintaining a consistent 20 foot depth at the entrance, the harbormaster feels that safe passage will be improved during the winter. South of the harbor entrance is a shallow delta formed by the Santa Clara River. This area is dangerous due to breaking waves during periods of high winds and rough seas. This shoal area is said to be easily avoided by following navigation instructions provided by the harbormaster.

Commercial Passenger Fishing Vessels

Three commercial passenger fishing vessels operate out of Ventura Harbor. The vessels, two 65 footers and on 75 footer, are all "open" partyboats. The vessels operate all year, although trips are occasionally cancelled due to storms or rough seas as is the case with sportfishing vessels in the other three harbors. A representative of the sportfish landing states that the company is generally satisfied with the harbor entrance conditions if the depth at the mouth is maintained by periodic dredging.

Commercial Fishing Vessels

Until December of 1978, commercial fishing vessels did not use Ventura Harbor except on rare occasions due to a lack of berthing and commercial facilities. The harbor manager has recently provided 20 moorings for commercial fishing vessels and has set aside an area for transient berthing.

In January 1979, nine commercial fishing boats were regularly using the transient berthing and 34 fishermen with vessels ranging from 40 to 70 feet in length had requested moorings.

Future Harbor Developments

During 1978, the Ventura Port District held two meetings with local commercial fishermen and fish processors to determine the needs of the industry in regard to commercial fishing facilities. From these meetings harbor administrators began to define a plan for the development of a commercial fishing complex which would be compatible with other users of the harbor.

Ventura Harbor has excellent potential to serve the needs of a developing commercial fishing industry. The harbor manager has encouraged industry representatives to participate in the planning of commercial fishing facilities. With the recent placement of new moorings for commercial fishing boats and additional space available for transient vessels, fishermen are now using the harbor and gaining experience with the entrance. As in Santa Barbara, regular dredging is a primary factor in maintaining a safe entrance.

Growth of the industry in this harbor may be slow until larger "market fish" buyers or processors establish operations in the Ventura area. With the exception of sea urchin, anchovy and squid processed in Oxnard, large amounts of fresh fish and shellfish must be shipped to Santa Barbara, Los Angeles or San Pedro for processing.

PORT DESCRIPTION OF CHANNEL ISLANDS (OXNARD) HARBOR

Channel Islands Harbor (Figure 4) is located on the waterfront of Oxnard one mile to the northeast of Port Hueneme, six miles northeast of Ventura Harbor and 65 miles north of Fish Harbor, San Pedro. The Ventura County Department of Airport and Harbors administers this harbor.

The development of this modern harbor complex has been historically structured to meet the needs of the rapidly growing numbers of recreational boaters. Two parcels with a total of 42 acres of water and land remain undeveloped. In February 1979, the South Central Regional Coastal Commission approved a use-plan providing for 748 new berths and various landside facilities to accommodate the needs of both recreational boaters and the commercial fishing industry.

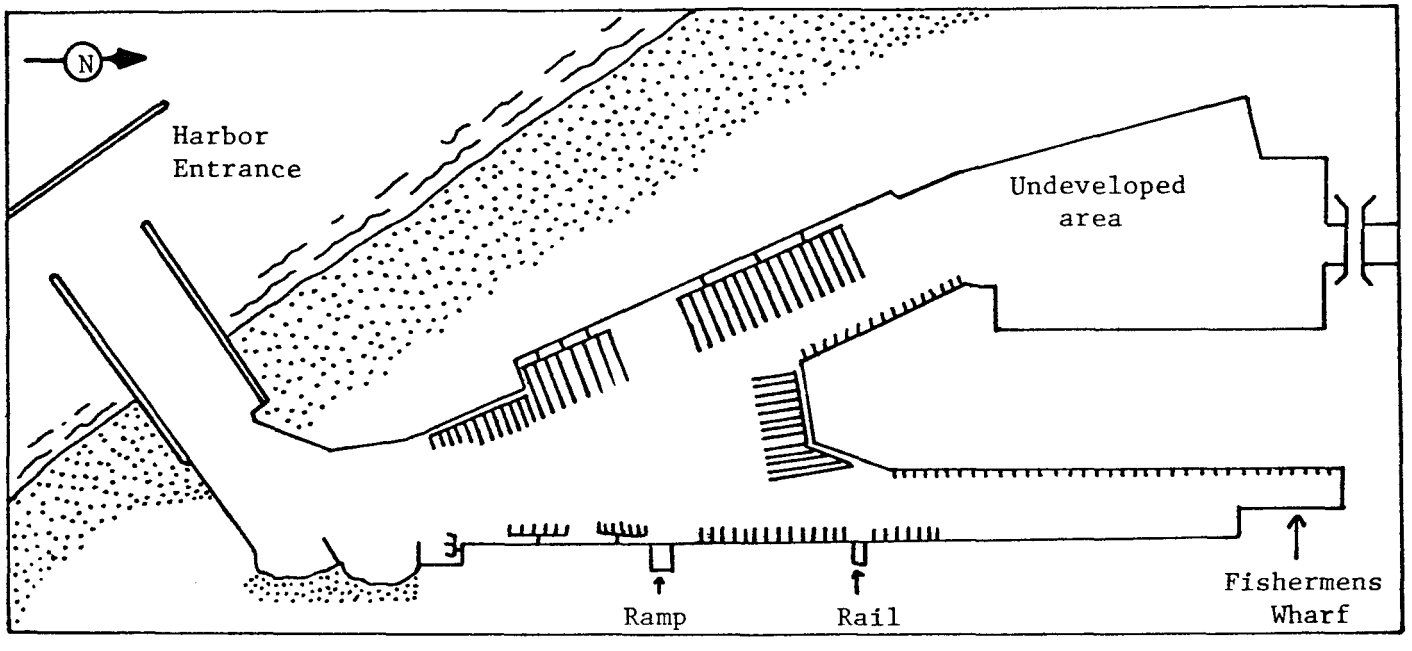

Figure 4. Channel Islands Harbor

Berthing: There are 1,660 slips in this harbor, the majority being occupied by recreational boats, although approximately 115 commercial vessels are interspersed among them. Harbor administrators estimate the ratio of commercial to recreational boats to be 1:16, or 6.5 percent commercial fishing vessels.

Existing marinas were developed by the County of Ventura and private enterprise. The county uses funds generated from leases to develop the landside and water basins. Private entrepreneurs lease these areas and build vessel berth complexes and landside facilities. A percentage of the gross income plus a minimum rent charge from each facility is paid to the county for operation of the harbor and funding for emergency capital projects.

Concessionaires administering slips vary considerably in business structure, facilities and services available. Examples of these operations include apartment and hotel complexes, marine supply and vessel repair companies, marinas with boat sales and rentals and a sportfish landing which provides berthing for both commercial passenger fishing vessels (partyboats) and commercial fishing boats. A non-discrimination clause is written into each lease to insure that commercial fishing vessels have equal access to berthing. Rates vary from $2.40 to $2.65 per foot per month. One small complex has slips available for $1.95 per foot, but there is a 28 foot maximum and the marina is usually filled to capacity. A transient dock is available with ten 50 foot fingers and an average capacity of forty 25 foot vessels. The rates are graduated according to the size of the boat: zero to 25 feet, $3.00 per night; 25 to 35 feet, $5.00 per night; 35 to 55 feet, $10.00 per night. A 40 foot vessel staying one month would be charged $300. At times this facility is used by commercial fishing vessels based at Port Hueneme.

Fuel: The harbor has one fuel dock which provides both diesel and gasoline fuels. The facility has two tanks for diesel with a total capacity of 10,000 gallons. The hours of operation were 8 a.m. to 5 p.m. in 1978. The cost per gallon of diesel fuel is reduced for purchases over 20 gallons and for all commercial boats. The representatives of the fishing industry feel that fuel costs are significantly higher than in neighboring harbors.

Ice: A crushed ice machine is available at a wholesale fish facility in the Fisherman's Wharf complex in the northeast corner of the harbor. The machine provides ten tons of ice per hour and is sold to fishermen at $20 per ton.

As mentioned previously, blocks of "fish ice" are available in large quantities from a company in Oxnard, although the company does not deliver to the harbor.

Haul-Out Facilities: Two haul-out facilities in the harbor have travel-lift capability and one also has a marine railway with a 60 ton capacity. This is the only marine railway between San Francisco and San Pedro. Both companies have drydock areas for boat service and repair. Each facility allows vessel owners to do their own repairs. Marine engine repairs, ship chandlers and welding services are available in the harbor.

Hoists: Fish and sea urchin are unloaded at one hoist in the harbor. The hoist, operated by a wholesale fish buyer at the Fisherman's Wharf complex, is rated at two tons, but is operated at a maximum of 2,800 pounds for safety reasons. The charge for using this hoist is a standard $5 per lift with a $10 minimum. The hoist is in operation from 8 a.m. to 12 midnight.

Harbor Entrance: The entrance to Channel Islands Harbor has a northeast orientation, then turns north into the entrance basin (Figure 4). The mouth is protected by jetties on both sides and by an off-shore detached breakwater. A sand trap lies east of the breakwater and north of the entrance. The 1979 Boating Almanac states that this area is "subject to rapid and uncertain shoaling", and suggests that the entrance should be approached south of the breakwater. The depth of the entrance from the breakwater to the fuel dock is reported to be 19 to 20 feet at MLLW (mean low low water). The remainder of the harbor is about ten feet deep at MLLW in the main channels. Harbor administrators state that the entrance to the harbor is safely navigatable throughout the year since the U.S. Army Corps of Engineers contracts a firm to regularly dredge the entrance every other year.

Commercial Passenger Fishing Vessels

Channel Islands Harbor has the largest charter fishing fleet of the four harbors in the study area. Vessels are based at the sportfish landing and range in size from 40 to 85 feet in length. The number of charter boats remained at about ten during 1978 with an even mix of "open" (walk-on) and group charter vessels. Three dive boats operate from the landing. There are indications that the partyboat fleet will expand in 1979.

Commercial Fishing Vessels

Recent counts by harbor administrators and a commercial fishing organization have shown that between 115 and 125 commercially licensed fishing vessels are berthed in the harbor. A majority of these boats range in length from 26 to 45 feet. A significant portion of the fleet is sea urchin vessels, although a cross section of southern California fisheries is represented in the harbor. These include swordfish boats, hook-and-line rockcod boats, crab and lobster trappers, and albacore trollers. With a few exceptions, larger purse seine and trawling vessels are generally absent from Channel Islands Harbor.

One fish wholesaler buys and processes fresh fish at the Fisherman's Wharf complex. Two sea urchin processors operating in Ventura and Oxnard use the hoist at the complex, as do two companies based at Los Angeles. Fish are also unloaded and trucked to San Pedro processors.

In 1978, a fisherman's cooperative was formed in the

harbor and a fishermen organization was incorporated to represent the fishermen from Ventura to San Diego. Both of these groups have provided harbor administrators and coastal planners evidence of a need for comprehensive planning for commercial fishing facilities within the harbor.

Future Harbor Development

The County of Ventura plans to develop two parcels within the harbor consisting of 9.5 acres and land and 22.5 acres of water, a total of 32 acres. This is the last remaining major area to be developed in Channel Islands Harbor. The plans call for 748 new boat slips, parking areas, restrooms, a commercial complex of retail outlets and services, a community/convention center, restaurants and yacht club. The South-Central Regional Coastal Commission approved this use-plan with several significant conditions regarding commercial fishing vessel berthing and shoreside facilities. These conditions provide the following:

1. Sixty commercial slips to be reserved for "active" commercial fishing vessels. An active commercial vessel is defined as "a vessel used exclusively for commercial fishing and engaged in commercial fishing not less than 100 days on the average per year."

2. Reservation of up to 90 additional slips in the parcel adjacent to the commercial marina to be offered to active commercial fishermen on a first right of refusal basis. The lease rate for these slips will be the same as for slips in the commercial fishing vessel marina or to be based on the average slip rental rates charged for active commercial fishing vessels in all southern California marinas and harbors from San Diego to Port San Luis.

3. A transient commercial dock located in the commercial marina area which will provide daily rental rates for commercial fishermen.

4. Parking spaces to be reserved on a one-to-one basis for each active commercial fishing vessel which leases a slip. Parking is to be located close to the commercial fishing vessel marina to minimize the distance commercial fishing gear must be hauled. No time restraints are to be placed on the parking spaces.

5. A landside vehicle loading/unloading zone is to be provided near the commercial slips.

6. Area in an adjacent parking lot is to be made available on non-holiday weekdays for fishermen to dry and mend nets and repair gear.

7. A fuel dock which will provide 24 hour service.

8. A pump-out station adequate to meet all marine needs

(i.e. bilges, holds, oil changes) is to be provided for at any location within the Channel Islands Harbor.

These conditions were included in the use-plan to respond to an identified need for an upgrading of commercial fishing berthing and shoreside facilities in the County of Ventura. Implementation of this plan should enhance the viability of commercial fishing industry in this area. It is an excellent example of comprehensive planning allowing for the protection and upgrading of both commercial fishing and recreational boating industries.

PORT DESCRIPTION OF PORT OF HUENEME

The Port of Hueneme (Figure 5), located in Ventura County is owned and administered by the Oxnard Harbor District. It is an autonomous political subdivision of the State of California and is governed by a five person elected body. The port lies about one mile south of Channel Islands Harbor and is the last harbor facility southbound until Marina del Rey, about 45 miles away. It is the only deep water port between Los Angeles and San Francisco.

The Port of Hueneme owns and operates about 50 acres of landside area and nine acres of waterway. The remainder of the harbor is under U.S. Navy jurisdiction. This port is a deep-water facility which services harbor related industries requiring this specific feature. Deep draft vessels calling at the port consist principally of oil tankers, automobile and lumber carriers and U.S. Navy ships.

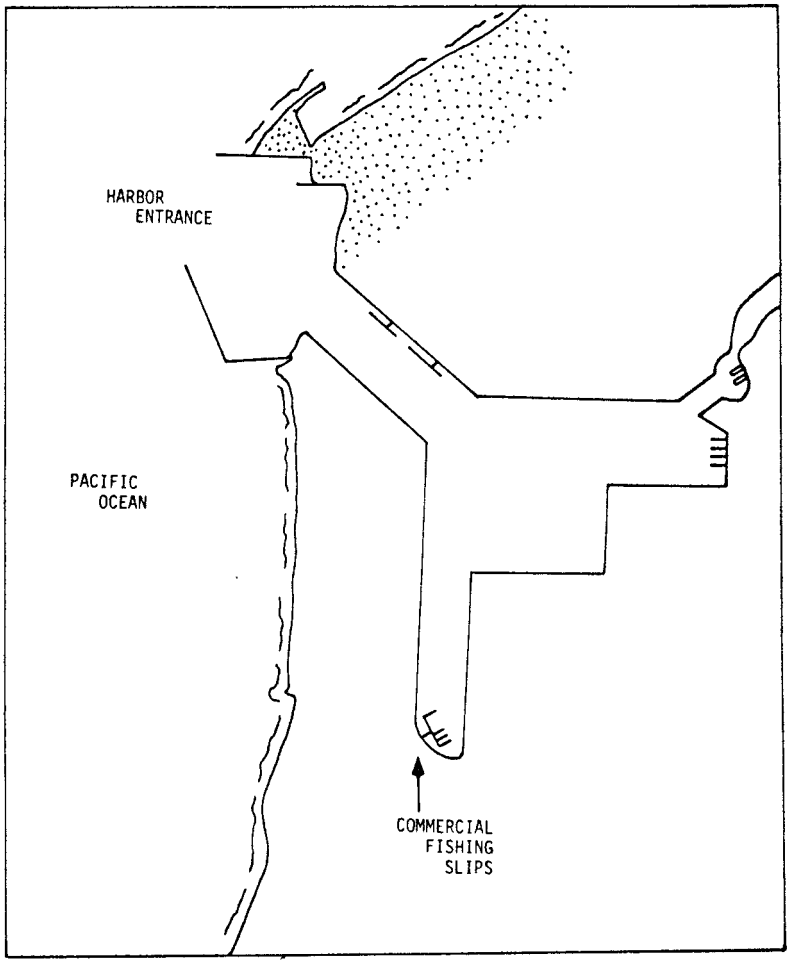

Figure 5. Port of Hueneme

The port also has a small, but highly productive fishing fleet, two kelp harvesting boats and a kelp drying plant.

Berthing: A small berthing area for permanently berthed commercial fishing (17) vessels and sport charter boats (4) is located at the south end of the harbor. Slip fees of $1.00 per vessel foot per month for commercial fishing boats were less expensive than other harbor fees in this study. Daily transient rates vary, but do not exceed one and one half times the monthly rate. At times fishing vessels must yield tie-up spots along wharves to larger deep draft vessels and temporarily relocate, often to Channel Islands Harbor.

Fuel: Diesel is the only fuel available at this port. The service facility operates during the daylight hours, although special arrangements can be made to obtain fuel at night on an emergency basis.

Ice: No ice facilities are available for fishing vessels. Three hundred pound blocks are available at the

previously mentioned ice company in Oxnard three miles away.

Haul-Out: There is no haul-out facility in Port Hueneme. The nearest is one mile away at Channel Islands Harbor or at San Pedro, 64 miles to the south.

Hoist: There are no hoists in Port Hueneme to serve the commercial fishing industry. Fishing vessels are allowed to unload along the wharves using the vessel's own hoist. There is a wharfage fee of $2.50 per ton. Two fish canneries own suction pumps with escaltors which are kept at the harbor to unload squid, anchovy and mackerel from purse seiners. Arrangements can be made with these companies to use the pumps for a fee.

Harbor Entrance: Port Hueneme is a man-made harbor with an entrance protected by two jetties (Figure 5). The channel is oriented toward the southwest. A deep canyon just off the harbor entrance guarantees a permanent opening with no sand deposition. This is a primary factor contributing to low maintenance and safe passage.

Commercial Passenger Fishing Vessels

Four "open" and privately operated partyboats are based at Port Hueneme. Two 57 foot boats can accommodate 20 passengers each and two 65 foot boats can carry 40 and 50 passengers respectively. The boats usually fish within one hour from port, but often fish the Santa Rosa Flats 3.5 hours away. A nearby building is jointly used as an office to administer their business activities. Parking is available near this office for partyboat patrons.

Commercial Fishing Vessels

The vessels berthed at Port Hueneme constitute a small, but diverse and productive fishing fleet. Most commercial fishing activity is with purse seine gear, although several boats are combination fishing vessels, employing trammel nets, gillnets, hook-and-line and harpoon gear. At least three trawl vessels operate out of the port landing high valued halibut, rockfish and sole.

A recent economic report states that, "by far, the most significant portion of the fishery consists of squid and anchovy, which are processed in an Oxnard cannery and shipped in containers by road to Los Angeles. The balance of the fishery, some squid and groundfish for local markets, make up five percent of the total" (McMullen, 1978). It is significant that this five percent "market fish" represents 32 percent of the value of the total landings. The McMullen report continues, stating, "the total movement (of fishery products) which was slightly down, at 19,000 tons in 1977, has held steady over the years and will continue to be steady, principally due to the limited capacity of the port for additional fishing boats."

This small permanent fishing fleet and a few transient vessels have consistently landed the greatest tonnage and second highest total value of finfish of the harbors in the study area (Table 2).

Several of the trawl vessel captains and at least two processors in the study area have expressed a desire to use Port Hueneme as a base of operations during certain times of the year.

A productive trawl area lies between Anacapa Island and Port Hueneme. Running time to Santa Barbara from these trawl grounds can exceed three hours, although Port Hueneme is within 20 minutes. In 1978, one processor in Santa Barbara would route the larger trawlers and blackcod vessels to Port Hueneme to unload (even without the convenience of a hoist). The fish would then be trucked to Santa Barbara for processing.

Also in 1978, a large 74 foot blackcod boat experienced difficulty unloading and acquiring temporary berthing in Santa Barbara Harbor. The previously mentioned processor suggested Port Hueneme as an alternate, but due to the lack of transient berthing there, the vessel moved on down to San Pedro. The plant lost the catch produced by this vessel (Appendix III).

Newer and larger trawlers are expected to enter the offshore California fisheries in response to the extension of the U.S. Fishery Conservation Zone from 12 to 200 miles. Exploratory fishing has already begun in the relatively untouched deeper waters south of the Channel Islands. San Pedro and Port Hueneme are the closest deep-water ports to these potentially productive areas. Many of the newer trawl vessels in the 70 to 90 feet length range have drafts of 12 feet or more. Loaded trawlers or purse seiners of this larger class may seek a deep-draft harbor, such as Port Hueneme, if berthing and other shoreside facilities are available. Maneuvering these larger vessels in a harbor congested with recreational boats poses an additional problem.

Future Harbor Development

The Oxnard Harbor District is reviewing a master development plan for the Port of Hueneme completed by a consulting firm in July, 1979 (McMullen, 1978). This plan was also written for the California State Coastal Commission to comply with the requirements of the California Coastal Act of 1976.

One of the conclusions of the master plan is that additional harbor area needs to be acquired to permit port expansion. The document also states, "the areas of port activity which best fit the criteria of effeciency of land use, labor intensity, revenue generation and support of the local economy and high probability of expansion are: (1) support of the off-shore oil industry, (2) citrus and farm

produce shipping, (3) automobile importing, processing and distribution, and (4) lumber import and distribution."

To allow for the future expansion of the commercial fishing industry, a fifth area of activity might be considered in any future harbor development: (5) commercial fish unloading, berthing, and support facilities for vessels in the 70 to 90 foot range or larger.

ASSESSMENT OF FISHERY RESOURCES

The fishery resources of the study area are discussed separately with no attempt to estimate natural abundance of stocks. However, the landings and values of these fisheries and the seasonal availability are discussed. Figure 6 gives the reader an indication of the seasonality of the major fisheries of the study area and Figure 7 illustrates commercial concentrations of fish and shellfish within the study area.

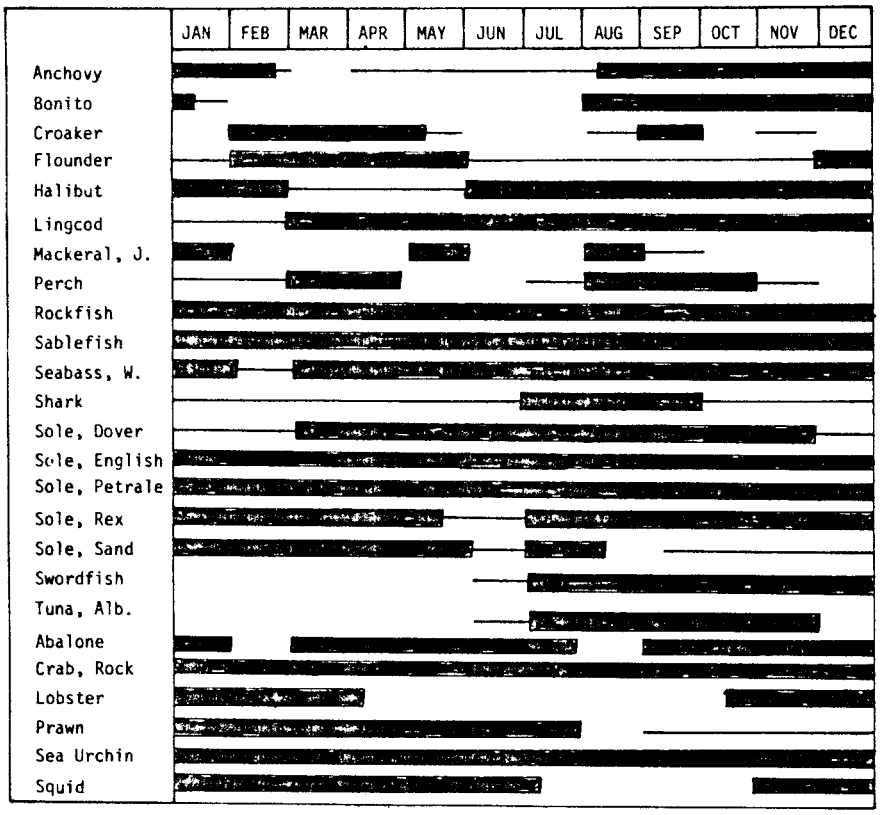

Figure 6. Season distribution of major fisheries in the Channel Island area

Review of Major Fisheries

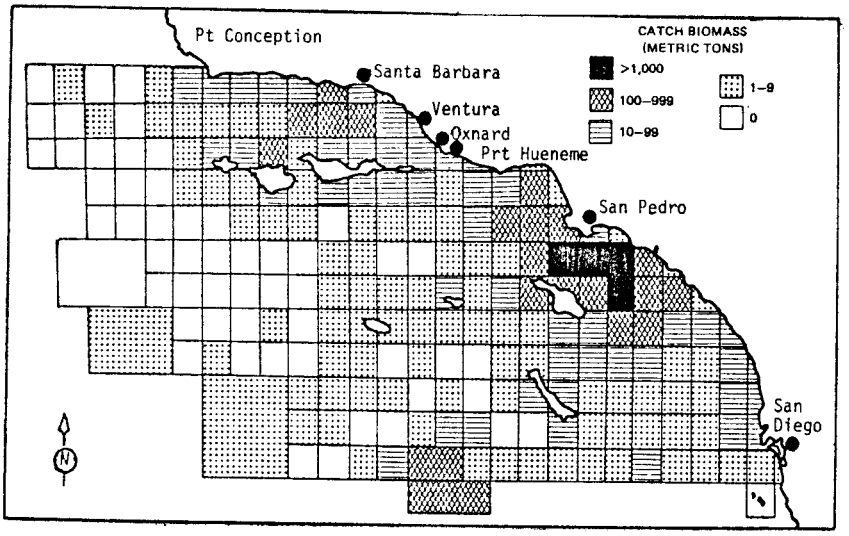

Figure 7. Distribution of fish and shellfish catch in southern California in 1973 (Allen and Voglin, 1977)

Pacific Hake

A survey of Pacific hake resources was conducted by the National Marine Fisheries Service in April and May, 1974. The survey located hake concentrations from Port Hueneme to Crescent City, California. Although Most concentrations were found north of Point Ano Nuevo several trawl samples were taken in the southern Santa Barbara Channel. Most of these were juvenile hake of one to three years old. These 30-40 centimeter fish were taken on the bottom at 119 fathoms. Coastal stocks of hake do not enter the traditional trawl fisheries (foreign) until four years old (Fukuhara, 1974). With the size constraint currently demanded by the hake market and with most commercially harvestable concentrations of hake only available in northern California and southern Oregon, it is unlikely that a hake fishery will develop in the study area.

Abalone

The abalone resource supported a major fishery in California as far back as 1879 when annual landings were over 4 million pounds. At that time the fishery was mostly centered at Monterey. However, as availability of the local resources dwindled, fishing activity shifted to Morro Bay in the 1940's. The Morro Bay divers experienced catch declines and in 1967 began relocating farther south to the Santa Barbara area. This has placed increased pressures on the

abalone resource of the Channel Islands.

Abalone landings have dropped from a record year of 5.4 million pounds in 1957 to 1.8 million pounds in 1976 (Figure 8). A slight increase is reflected in 1972 representing a new market for black abalone. An export market was developed in Japan for the black abalone through efforts of the National Marine Fisheries Service. The product is not accepted by domestic consumers because of the smaller steak size and, in particular, the dark color. Abalone is still the most valuable single fishery in the study area representing $747,000 to the fisherman in 1976.

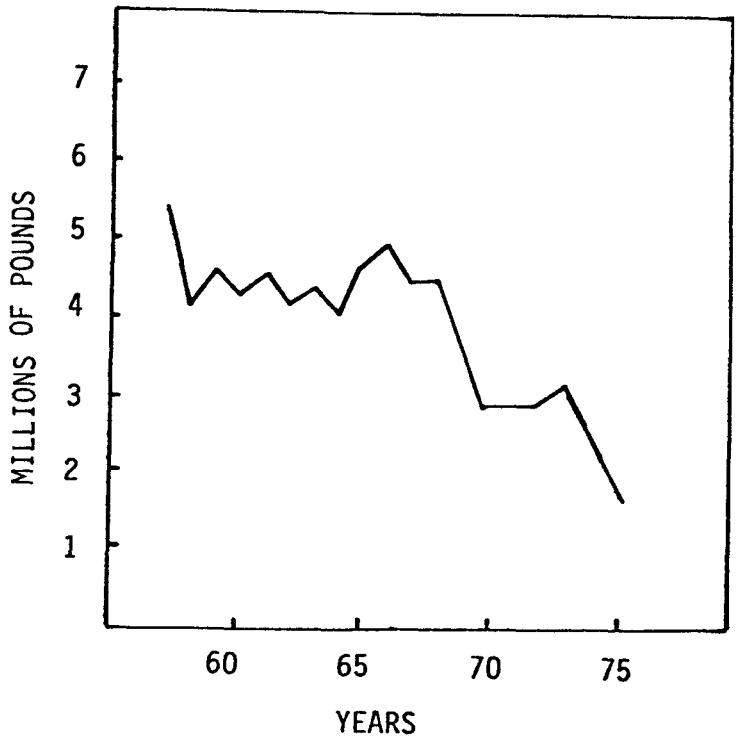

Figure 8.

The Santa Barbara abalone fleet consists of about 100 boats and 150-175 divers (Richards, 1977). In 1978 the number of vessels and divers declined to about one half of the 1977 figure due to a limited entry program developed jointly by the abalone industry and the California Department of Fish and Game. Recreational divers on partyboats and private boats also place heavy demands on the resource, especially on Anacapa and Santa Cruz Islands (Winzler and Kelly, 1977). Numerous commercial abalone dive boats have converted to participate in the sea urchin urchin fishery, principally during the closed abalone season in February and August.

The abalone fishery is a closely regulated fishery and shows no indication of expanding. Strict enforcement by the California Department of Fish and Game, stiff licensing requirements and an abalone enhancement project recently funded by the University of California Sea Grant Program, the California Department of Fish and Game, and the counties of Santa Barbara and Ventura, all show promise to protect and enhance the resource. Nevertheless, there is little chance of a significant increase in the number of commercial dive boats entering this fishery. On the other hand, considerable interest in recreational diving in the Channel Islands area is predicted to place heavy future demands on the resource as well as local harbor facilities.

Sea Urchin

The sea urchin fishery began in the early 1970's with

processing and export marketing assistance from the National Marine Fisheries Service. It is a dive fishery and provides some relief to the abalone resource by attracting some of that fishing effort while generating considerable revenue to divers and seafood processors.

The near-shore sea urchin resource is experiencing over-exploitation effects of this new fishery and the fishing effort has moved from coastal waters to the more productive Channel Islands. Some fishermen and researchers believe that the resource may soon be reaching a fully exploited condition. It has been reported that it takes five to six years for the animal to reach acceptable market size. For the past three years, 1975-1977, the annual harvest has been 10-13 million pounds. California Fish and Game officials expect the 1978 catch to reach 12 million pounds. The fishery is limited by bad weather and the market demand for sea urchin roe in Japan.

Most boats used are the fast RADON boats of the abalone fishery. As the fishery develops the trend has been to use slightly larger and more efficient 35 to 40 foot boats. These are capable of carrying 10,000 to 15,000 pounds of catch. There are roughly eight to ten boats presently in the fishery. Very recently, fishermen have been working the urchin beds of San Clemente Island and delivering to San Pedro. This trend will tend to lessen the number of sea urchin boats in the study area.

Anchovy

The anchovy fishery is well established in southern California. Landings are large and primarily reduced to fish meal which in turn is utilized as high protein supplements in poultry feeds. Other uses include about 12 million pounds for live bait and a limited amount for human consumption. The abundance and high protein content of anchovy and the demand for high protein animal feed supplements will probably guarantee a continuing fishery for reduction in the study area. The anchovy fishery is under Federal management utilizing area and quota regulatory restrictions.

Anchovy are fished with purse seiners and have the flexibility to convert to other fisheries such as bluefin tuna, squid, mackerel, and bonito. These alternate fisheries offer better income to the fishermen, however, the supply and demand for those fisheries fluctuate considerably. In the study area, anchovy are landed only in Port Hueneme.

Bonito

Pacific bonito have been fished commercially and recreationaly for many years in southern California. The availability of this seasonal fishery can fluctuate considerably from year to year (Figure 9). Historical

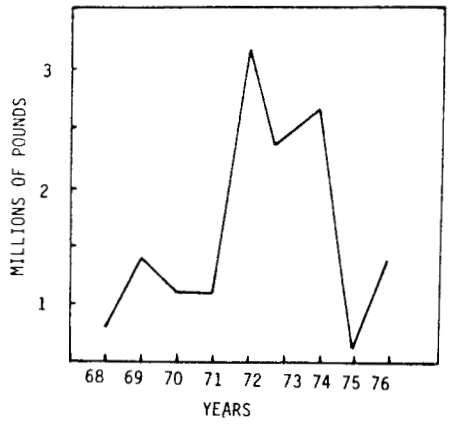

Figure 9. Bonito landings for the ports of Santa Barbara, Ventura, Oxnard and Port Hueneme, 1968-1976.

catch statistics do not necessarily reflect the availability of the resource or the demand for the fish. Canneries began to seriously process bonito in tuna style packs in 1966. The demand for this canned product will probably hold and more than likely increase.

Bonito are usually taken commercially by the smaller sized purse seine vessels from San Pedro and Port Hueneme. Some researchers feel the bonito resource may not sustain a much more intense fishery.

Sablefish (Blackcod)

The sablefish is another resource that has supported a growing commercial fishery. Total statewide landings have increased seven-fold since 1965 when 2.9 million pounds were recorded. There has been a significant increase in landings in the Morro Bay to Port Hueneme area (Figure 10). Foreign markets are credited for much of this growth.

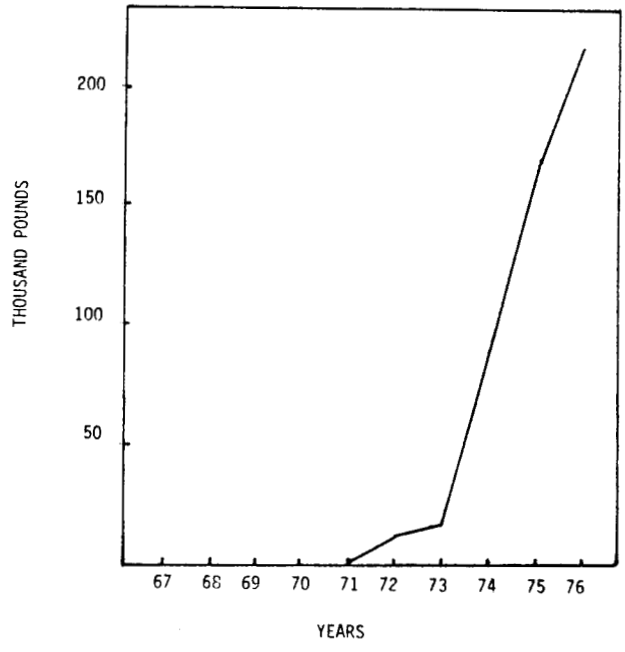

Figure 10. Sablefish Landings in San Luis Obispo, Santa Barbara and Ventura Counties, 1968-1976

Over 14.1 million pounds of sablefish, also known as blackcod, were landed in California in 1975. Of that, only 1.4 percent was landed in southern California. More recently, foreign markets have been developed in Korea and Taiwan as well as a domestic market for fresh "butterfish" fillets. Most fishermen have adopted the Korean style fish trap which is designed to fish exceptionally deep waters. In 1978, over four million pounds were landed in southern California alone. Although the data is not readily available, if central and northern California sablefish landings in 1978 do not fall below those recorded for 1975 (which they probably will not), landings in the study area would represent 18.6 percent of the state-wide landings; an increase of 10.2 percent.

Eight active trap fishing boats fish the southern California deep waters. Three of these boats fished the Channel Island area and delivered to buyers in Santa Barbara during 1978. Shortly thereafter, these three boats began delivering to San Pedro dealers because of the difficult berthing situation in Santa Barbara Harbor. These boats still fish the same Channel Islands area, however.

There is a sizeable standing crop of sablefish, but very little spacial movement is demonstrated. The fishery cannot withstand prolonged fishing effort in limited areas (Phelan, 1979).

Squid

The squid resource in California is principally harvested for bait and human consumption. Some is canned for export to Greece, West Germany, and Philippines. There is a growing world demand for squid, however this is essentially for species larger than the market squid of California. The fishery is somewhat seasonal in the study area beginning in November, peaking in March and finishing up the following July. This resource has considerable potential and will realize much higher landings in the future.

Shark

The California consumer historically has not accepted shark as a food fish. Only recently has the domestic market begun to develop for this wholesome product. Several species occur off the Channel Islands as well as closer to the coast. The most desirable to seafood consumers are the leopard, thresher and soupfin sharks. There is some fluctuating demand for blue shark, skate wings and, more recently in the Santa Barbara area, dogfish and angel sharks. The dogfish is primarily exported to markets in Europe. The resource probably has potential for further development.

While there are large standing crops of elasmobranch species, this group traditionally has demonstrated low productive rates and an inability to support prolonged and heavy fishing effort.

Rockfish (Rockcod)

As a group, the many species which constitute the genus Sebastes range beyond areas presently being fished. Their potential yield and total population size are unknown (Radovich, 1971).

Over 1.2 million pounds of rockfish are annually landed in the study area with 80 percent landed in Santa Barbara (Table 2). Rockfish provide fine eating fish fillets and are primarily sold fresh. Some fishery specialists feel an underutilized resource of short-belly rockfish (Sebastes jordani) occur in this area. The National Marine Fisheries Service is planning to survey this resource in cooperation with local fishermen using experimental mid-water trawling gear. The Los Angeles fresh fish market as well as local seafood restaurants may be ready markets for this product. The National Marine Fisheries Service is planning market research in Japan as well as for domestic canned petfood markets.

Albacore Tuna

The albacore fishing industry supplies a well established market at San Pedro and San Diego tuna canneries. The fishery consists of a very large fleet with an estimated 1,000 vessels. The fishery is seasonal, usually beginning in July and often lasting through November. The fleet usually fishes 50 or more miles from shore and the highly migratory resource may be located anywhere along the California, Oregon, or Washington coastline. Home ports for the albacore fleet are scattered throughout this range. Small boats under 80 feet in length predominate this fishery (Frey, 1971). Buying stations for the southern California canneries exist in most major west coast ports. The distance from the fishing grounds to the canneries is often too great for the many smaller fishing boats to make frequent deliveries and return again to the fishing grounds. Therefore, the fish are unloaded at these buying stations and trucked frozen to the individual canneries.

Lobster

For nearly 80 years commercial fishermen in southern California have sought the spiny lobster. They are fished with traps along all coastal rocky areas including the Channel Islands. Although landings have steadily declined in recent years, the value has increased considerably. Strict season

and size restrictions are enforced by the State of California. Fishermen use boats ranging from 15 to 50 feet with the more popular in the 18 to 30 foot class. Often a larger "mothership" assists a fleet of smaller skiffs working offshore islands. Special permits are required to fish lobster and it will surprise few if this fishery is eventually subjected to some type of limited entry program.

Flatfish

The only port in the study area that consistently harbors a trawl fleet is Santa Barbara. Southern California trawlers also berth and unload at the northern ports of Avila and Morro Bay. The fishery consists of the several species of sole, namely petrale, English, and rex and a few Dover sole, flounder and turbot. The sole fishery occurs year-round, although landings fluctuate somewhat in the study area.

Flatfish are one of the more important sources of fresh market fish in California. English sole is the predominant species and has been since the inception of trawling in 1876 (Frey, 1971). Boats engaged in this fishery are fairly old and range from 30-90 feet. Some flatfish are also incidentally caught in trammel nets set for halibut. Local commercial fishermen feel (and many researchers agree) that large stocks of flatfish as well as rockfish can successfully be fished on the outside of the Channel Islands. Dover sole, which do not show up significantly in landings of the study area, are known to occur in deeper waters. On the other hand, catches of petrale have been declining. In short, any increase in flatfish landings will more than likely be dependent upon locating new grounds.

Halibut

California halibut fishing is more seasonal than other flatfish, beginning in June and lasting through the following February. This is reflected by certain halibut trawl grounds being closed by the State of Calfiornia from March 15 - June 15. Halibut are generally caught in trawl, trammel, and gill nets, although some are captured on hook-and-line gear. Consumer demand for halibut has generally exceeded the supply as reflected in increasing exvessel prices. In Santa Barbara fishermen are currently paid from $1.15 to $1.25 per pound.

Review of Latent or Underutilized Fisheries

Not so long ago, several marine resources were referred to as undeveloped or underutilized. These included sea urchin, sablefish, shark, bonito, anchovy, squid, jack mackerel, Pacific hake and a few others. From observations made in the previous section of this report, it is obvious that little development potential remains for sea urchin, anchovy, and, possibly, very little in shark, bonito and hake.

Hake is included, not because it is fully utilized (which it is not), but because the juvenile hake occurring in the study area have no present market potential.

Sablefish, rockfish, jack mackerel, blue shark, dogfish shark, and squid are resources which are currently fished in the study area and marketed either in California or overseas. These resources are generally considered to have some potential for development. The following summaries briefly describe the limited potential of each.

Sablefish: This resource has been primarily harvested by foreign fishing fleets. The Federal Fishery Conservation and Management Act of 1976 established management systems to encourage domestic fishing for this species as well as others. The catch in southern California alone has increased from 17,000 pounds in 1975 to over four million pounds in 1978. Ready markets await this fishery.

Rockfish: There is interest in developing a new fishery for shortbelly rockfish utilizing mid-water trawl gear. There is no projection of the amount of resource that is available. A foreign and domestic market is currently being developed.

Jack Mackerel: Most researchers agree that the resource can withstand additional exploitation. Current markets are poor. A limited amount is used at fresh fish markets or is canned. Most mackerel are being processed into canned petfood. Foreign and domestic market development is needed.

Blue Shark: This species is like all other elasmobranches in that reproductive cycles are long and fecundity is low. The resource would support a good strong fishery for a limited time. It might easily be overfished. However, with some needed market development, it would support a more intense fishery than presently exists.

Dogfish Shark: As with blue shark, the reproductive cycle is a limiting factor to a prolonged and intense exploitation of the resource. They currently abound in quantities often considered a nuisance to trawl fishermen. A European market is available to an increased harvest of current resources.

Squid: This is a seasonal fishery and is dependent upon the spawning period of the squid. The resource is believed to be able to support limited additional exploitation.

The world demand for squid is increasing. Although

the California squid is smaller than those on the world market, it will be in good demand eventually.

Other traditional fisheries are being considered as possible future fisheries although little is known about the resource status. These are being encouraged by foreign market attractions and include sea cucumber and Kelletia, a large marine snail. The future of these cannot be determined at this time.

Pelagic red crab abound off extreme southern waters and seldom occur in waters of the study area except under abnormal oceanographic conditions. Although this is a much talked about and tremendously abundant pelagic resource, there is little optimism that a fishery for these crab will operate from a port within the study area.

Saury occur far off-shore, but within reach of a commercial fishery. The quantities of fish are considered more than adequate to support a large scale fishery. There is no current market for saury. Japanese vessels explored the resource and found the fish unsuitable for their market. Until a market for saury is identified, no fishery is likely to be developed.

Large prawns, both spot and ridgeback occur in potential commercial quantities of the study area. The more productive areas are more to the north, however. The fishery seems to be highly seasonal making the availability inconsistent. Much work on trap design and stock assessment is needed. A ready market is available for both species. It is not likely that a significant fishery will develop due to the fluctuating availability of the resource.

Mesopelagic fishes include lantern fish (Myctophidae) and deepsea smelt (Gonostomatidae). These may be the most underutilized fisheries off the California coast. The major drawback to their commercial utilization are that they are offshore, deep, not concentrated and very small in size.

Market Profile of Study Area

The most basic economic return (dollar value measurement) from a fishery is the income to the commercial fishermen as determined by the exvessel price paid to the fishermen. The most recent year for which these price data are available, as well as landing data for the four port study area, is 1975. Over three million dollars were paid to commercial fishermen unloading their catches in the study area that year (Figure 11 and Table 2).

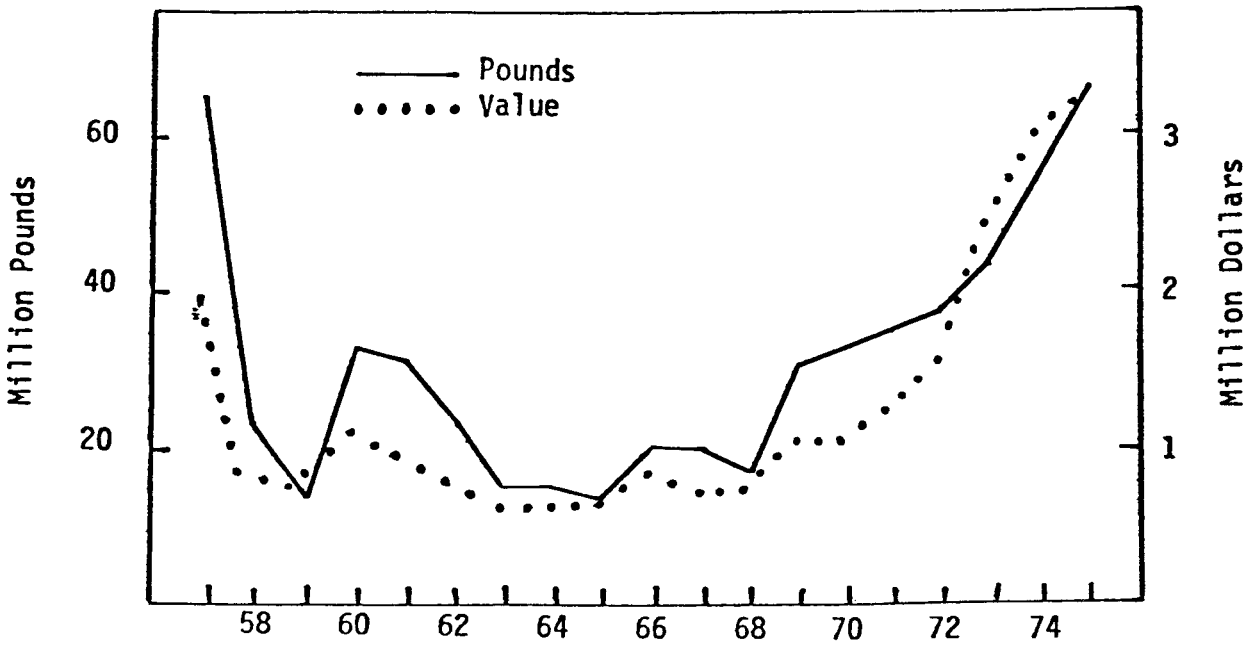

Figure 11. Commercial landings and exvessel value at Ports of Santa Barbara, Ventura, Oxnard and Port Hueneme, 1957-1975.

There have been no significant declines for any fisheries in the study area since 1975. By applying a 1978 exvessel price on a species-by-species basis to 1975 landings, inflation alone would raise the total exvessel value to over five million dollars in 1978. This estimate is conservative for the following reasons: (1) landing trend for the last eight years has been sharply upward; (2) known increase in landings of certain fisheries (i.e. shark, sea urchin, sablefish); (3) February 1978 prices were used to calculate the value.

When a multiplier effect is applied to the total exvessel revenue, a total economic benefit to the communities of Oxnard, Ventura and Santa Barbara may be significant. This multiplier accounts for increased economic exchange by fishermen returning their income to the area in the form of rent, housing, food, purchase of equipment, etc. Additional jobs are supported by the commercial fishery such as seafood processors, brokers, dock workers, truck drivers, mechanics, boat yard crews etc. Also, transient facilities for boats not homeported in the area add to local revenue generation.

Figure 11 illustrates well the collapse of the sardine fishery in 1957-1959 and a temporary recovery in 1960-1961. The fishery began declining again in 1962 and never recovered. The upward trend since 1968 was a result of more intense fishing for traditional fisheries and development of new ones.

Landings for most species are fairly stable. There is some legislation advocated at this time which could restrict fisheries in this area. Lower quota allocations for anchovy and a possible gill net season closure could adversely affect the total landings somewhat. Landings could also decrease if the fleet relocated outside the study area as already demonstrated in Santa Barbara. This is possible since berthing and other facilities are definitely lacking or inefficient. This has already been described in the "port description" section on this report.

On a positive note, further development of certain fisheries such as sablefish, squid, shark and possibly rockfish may increase landings. Harbor improvement to any one of the four ports in the study area would attract boats from adjacent areas. It is reasonable to assume that one or more migratory fisheries such as albacore tuna, bluefin tuna, bonito and mackerel will often provide intermittent harvest potential in waters off the study area. Interviews implied that four to five hundred commercial fishing boats may be attracted to the study area. The authors attempted to identify these boats and project that the first year might see 100 to 200 new boats. However, with new vessel construction, possible increased transient activity and continued relocation of boats from other ports (particularly albacore boats), it may be possible that a total of three or four hundred new boats could utilize ports in the study area in the next few years.

The 1973 catch off southern California illustrated by Figure 7 shows that the waters of the study area, especially north of the Channel Islands, were high producing areas in 1973. The rich area off San Pedro is represented primarily by the anchovy reduction fishery.

TABLE 2

LANDINGS AND VALUE OF COMMERCIAL FISH AND SHELLFISH BY PORT, 1975

PORT	POUNDS	VALUE
Santa Barbara		
Red abalone	519,890	$402,721
Sea urchin	2,569,620	210,111
Black abalone	594,152	201,976
Pink abalone	183,440	154,845
Spot prawn	129,774	144,008
Rockfish	991,101	136,904
California spiny lobster	51,052	107,729
Swordfish	60,463	96,963
Rock crab	269,628	54,308
California halibut	44,270	34,559
English sole	124,844	21,337
Bluefin tuna	80,751	19,402
Ridgeback prawn	27,607	15,451
Shark	38,265	9,772
White seabass	9,017	6,716
Petrale sole	22,334	5,232
Salmon	2,565	3,454
Green abalone	3,016	2,685
Threaded abalone	4,385	2,239
Rex sole	11,116	2,114
White abalone	887	1,127
Sablefish	17,437	1,091
Albacore	3,324	1,057
All other species	23,878	3,567
Port totals	5,783,176	$1,639,368
Ventura		
Rockfish	47,810	$7,949
Sea urchin	77,239	6,197
White croaker	24,870	4,573
Shark	16,071	1,774
California halibut	1,755	1,370
Salmon	749	1,030
All other species	2,052	1,606
Port totals	179,355	$28,556
Oxnard		
Sea urchin	2,315,298	$185,750
Swordfish	25,977	41,659
Rockfish	122,959	20,871
California halibut	17,848	13,933
Pink abalone	1,525	1,287
All other species	8,605	3,366
Port totals	2,492,212	$266,866
Port Hueneme		
Northern Anchovy	50,871,300	$794,031
Sea urchin	2,125,495	170,522
Pacific bonito	937,791	116,724
Market squid	5,117,325	109,433
Bluefin tuna	281,100	67,540
California halibut	22,746	17,756
Rockfish	79,824	12,959
Swordfish	7,656	12,278
California spiny lobster	3,581	7,557
Spot prawn	6,233	6,917
Shark	21,898	5,543
English sole	8,869	1,516
White croaker	6,468	1,189
White seabass	1,438	1,071
All other species	10,174	2,395
Port totals	59,501,898	$1,327,431
Study Area Total	67,956,641	$3,262,221

Commercial Fish Landing by Port

The four ports considered are Santa Barbara, Ventura, Oxnard and Port Hueneme. Port Hueneme is the port reporting the largest landings, over 59 million pounds and second largest dockside value, over $1 million (Table 2). Most landings at Port Hueneme are not destined to fresh or frozen fish markets, but to canneries and reduction plants. The fisheries consist of anchovy, squid, bonito and mackerel, in that order. Only eight percent of the catch for the entire study area is landed in Santa Barbara, but, these landings represent 50 percent of the total income to the fishermen. This is explained by the fact that the purse-seine fisheries for canneries and reduction plants are much lower valued than market fisheries such as sole, halibut, lobster and swordfish to name a few.

Ventura and Oxnard currently represent a very small and nearly insignificant portion of the landings. This situation could change significantly if port facilities needed by the fishing fleets were provided in these ports.

Market Seasonality

Fishing success in the study area is seasonal. Landings pick up in August, peak in October and November and taper off the following February. Strong influencing fisheries in this seasonality picture are anchovy, bonito, and albacore. If these three fisheries are disregarded, the fishing seasonality of the study area is shown to vary only slightly for the other fisheries which represent 72 percent of the total exvessel value generated by the commercial fishing industry (Figure 12).

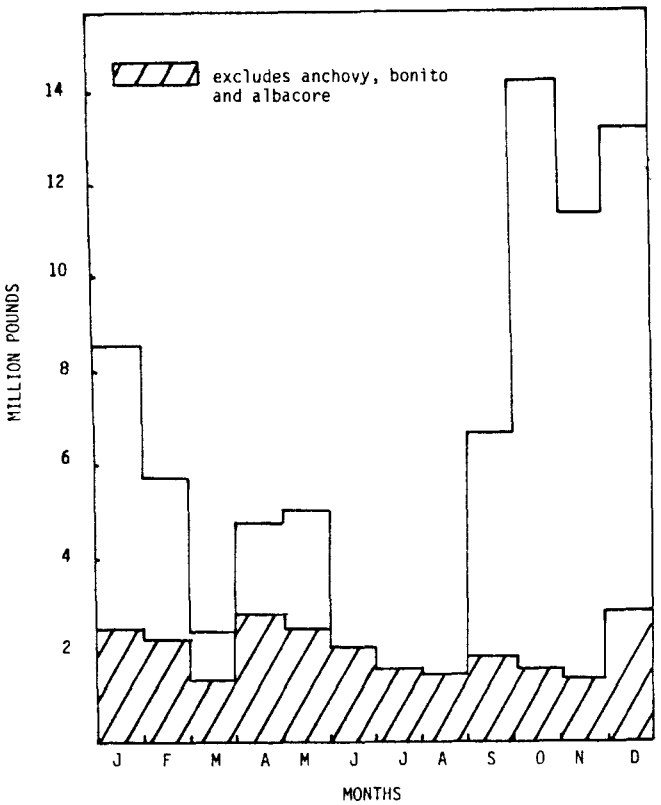

Figure 12. Commercial fish and shellfish landings at California ports of Santa Barbara, Oxnard, Port Hueneme and Ventura, 1975.

Seasonality data for study are not readily available, so these landings reported for CF&G Santa Barbara statistical region include landings of 8.2 million pounds at Morro Bay and Avila (10.8%).

Resource Utilization and Market Structure

Once the catch is landed it must find its way into respective marketing channels. Markets range from local fresh fish consumption to exportation to overseas markets. Anchovy, by far the largest volume fishery, is converted to a high protein fish meal by a local reduction plant. The meal is used as a high protein supplement in poultry feeds. Anchovy is also frozen for use as bait for commercial and recreational fishermen. A small amount of anchovy is canned for human food.

A new fishery for sea urchin began in 1972. Nearly all of the catch is processed in Ventura, Oxnard and Los Angeles. Processing consists of removing and packing the sea urchin roe for export to Japan. Once the roe is prepared for shipping it is trucked to Los Angeles and shipped to Tokyo via air. A small amount of sea urchin roe is consumed in the Los Angeles area.

Squid is processed locally by both freezing and canning methods. Frozen squid is primarily used for fish bait and human consumption. Much of the product is destined to foreign markets in Greece, Philippines and West Germany.

Rockfish, which has shown a steady increase in landings in the study area is processed in Santa Barbara. A small amount is processed in Oxnard for local fresh fish markets. Processing is essentially a fillet operation and there is good demand for the product both locally and in the Los Angeles area. A major marketing obstacle was recently minimized by the California Fish and Game Commission by permitting merchants to call certain rockfish species "Pacific Red Snapper" in the market place.

Abalone and lobster both experience a high consumer demand, a declining catch and an increasing market value. All processing is done locally and the products are consumed statewide. Abalone requires the most processing which consists of removing the shell, eviscerating, trimming, slicing into steaks, packaging and freezing. Lobster is cooked and sometimes packaged. An export market for the black abalone (discussed later in this paper) has recently slumped, but should recover because of decreasing world supplies of other abalone species.

Trawl fishing produces nearly one million pounds of sole which are processed locally into high quality fillets. The major market is the Los Angeles area. The market is shared with supplies from the much larger Northern California, Washington and Oregon trawl fishery.

Although the fisheries just discussed are not all inclusive, they produce the bulk of all landings. It is

essential to mention that all species currently harvested in the study area have ready markets. Dogfish shark and black abalone markets should still be considered to be in the development stage although markets are rapidly expanding for these and other underutilized species. Well established markets for overutilized fisheries are searching for new supplies including the promising, but slowly developing aquaculture programs. Other species such as anchovy, and squid are presently harvested and utilized, but successful marketing programs could redirect their utilization toward higher valued products for human consumption.

In general, it can be stated that there is a high worldwide demand for high quality seafood. This demand exists in the markets of the study area as well as Los Angeles. Although certain fisheries do not find adequate markets in California, foreign markets are usually available. Any increased harvest of natural resources or products of aquaculture programs will find ready markets and contribute to the economy of the local area.

SOCIO/ECONOMIC IMPLICATIONS

To effectively plan for commercial fishing facilities in any harbor a practical definition of a commercial fishing vessel is needed. Many pleasure craft are registered with the State of California as commercial fishing vessels that seldom or never fish commercially. Meeting the needs of these vessels does not meet the needs of the commercial fishing industry. Although it is the responsiblity of the California Coastal Commission to determine what will be accepted as "commercial fishing", one definition by the Pacific Coast Federation of Fishermens Associations says, "a vessel used exclusively for commercial fishing and engaged in commercial fishing not less than 100 days per year."

There is no question that berthing slips are in high demand and short supply in the study area for both commercial and recreational vessels. To simply increase the number of slips in any one or all of these ports does not guarantee that a commercial fishing vessel will be able to take advantage of one. Many social and economic factors play major limiting roles. These factors were identified during interviews with fishermen and seafood processors.

Berthing rates: All rates surveyed are considered reasonable by commercial fishermen for permanent slips ranging from $1.00 to $2.65 per foot of vessel length per month (Table 1). Transient rates in Santa Barbara were reported to be excessive and have forced several fishing vessels to leave the area. There was a concern expressed by most harbor administrators that it is a discrimination violation of State law to assess different rates or assign special berths for recreational and commercial vessels. Since there is a shortage of slips not only in the study area, but Southern California in general, it is obvious that the two interests

are competing for space and will continue to compete for any new space. With this competition in mind, it is difficult to plan only for commercial berthing facilities. It may be possible to satisfy State regulations by providing for a reasonable number of spaces to both commercial and recreational boats when planning new construction and to strategically separate the sites. An additional advantage in separating berthing for the recreational and commercial fleets would make certain facilities essential to each interest group immediately adjacent to the respective sites. For example, recreationalists want shoreside toilet and showers, simple storage, fresh water, and electricity. Commercials, on the other hand, want all these plus larger storage, cargo hoist, ice, dock space, etc.

A final word on rates is that some ports offer preferential assignment rates. The San Francisco Port Commission charges a minimum rate to fishing boats of $9.00 per month and a maximum of $21.00 per month depending upon the size of the boat. Free dockage is also provided to commercial fishing vessels while loading and unloading supplies or catch. These preferential assignment rates attract and encourage commercial fishing. Wharfage (unloading) fees also generate port income.

Ice: Although some modern fishing vessels have refrigeration systems, most need ice. The ice is essential and used to maintain the quality of the fish at sea until they are unloaded. Permanent and portable ice producing machines or block chippers with blowers are desirable since they are labor efficient and easily fill the hold of a boat prior to departing on a fishing trip or a truck offloading a boat's catch. An ice concession can be managed several ways. Fishermen, however, believe that they must be publicly owned and operated. They also would like to see more than one ice facility. Often commercial fishermen have conflicts with concession operators, or the facility is inoperative at critical times and open for business only during hours convenient to the operator. More than one ice facility might alleviate these constraints. The price paid for ice often varies considerably. Santa Barbara processors sell ice for $9.00-$12.00 per 300 pound block. An ice company in Goleta charges $11.00 to $12.00 per 300 pound block. Another processor in Santa Barbara provides ice to boats fishing for him at $4.00 per 300 pounds ($20 per ton). As previously mentioned in this study, fishermen prefer "fish" ice to clear ice since it serves their purpose and is much less expensive. Thus, it is reasonable that fishermen want to see more than one ice utility or at least one that is publicly owned and dedicated. Several Santa Barbara fishermen ice-up at Oxnard rather than Santa Barbara because of the inadequate facilities.

Fuel: Most fishermen want to see more than one fuel dock in a harbor for similar reasons discussed above for ice concessions. Both diesel and gasoline fuels are essential and

sufficient supplies must be readily available, especially during peak fishing seasons. Fishermen would also like to see an engine oil-change appliance at dockside. A fuel supply that is considered to be adequate for commercial fishing is beyong the limited scope of this survey. This will fluctuate with fishing seasons and increase as a port grows.

Safe Harbor Entrance: The weather conditions in the study area are relatively mild and offer good fishing most of the year. However, strong winds or severe offshore storms produce large swells or waves often creating dangerous conditions at harbor entrances. Strong currents carry and deposit coastal sands creating shoaling conditions at harbor entrances. This creates dangerous conditions that often close harbors. All ports in the study area, except Port Hueneme, require periodic dredging to remove these sand deposits. All ports have breakwater structures designed to protect the inner harbor, to allow for safe passage, and to provide sand traps. The breakwaters in Santa Barbara and Ventura appear inadequate, and both of these harbors intermittently have treacherous entrances.

Fishermen are very concerned about harbor entrances and are especially concerned about the Ventura Harbor entrance. The Santa Clara River, located about one half mile south of the Ventura Harbor created major damage to the marina in 1969. In January and again in February of that year heavy flood waters breached the river's north bank and a major diversion of the Santa Clara River flowed directly through the marina. Of the 295 boats berthed, 92 were lost. Slips totaled 540 of which 490 were destroyed or severly damaged. Since then, however, the river levees have been repaired and improved. An extensive dike was constructed between the marina complex and the 1969 flood area and is designed to direct any future flood waters back into the river channel. It is expected that the dike will provide adequate protection to the marina and adjacent facilities from floods. However, several fishermen canvassed during this survey remember this catastrophe and fear it could reoccur.

The presence of a Union Oil Company underwater pipeline easement to the south of the entrance precludes construction of an additional detached breakwater. The Ventura Port District is considering a novel, fixed sand by-pass system to transfer sands deposited at the harbor entrance. The District is confident that through the development of this by-pass system, a year-round, safe entrance can be maintained.

Dock Space: Sufficient space set aside on the docks or adjacent areas for commercial fishermen to work on fishing gear is sorely needed in all ports. Very few fishing ports in California provide adequate dock space for fishermen to lay out fishing gear for maintenance and repair. Space is also desirable at dockside for storage of commercial fishing gear, restrooms, showers, laundry, sewage, pump-out station, and parking. A port that can offer space for these dockside

facilities stands a good chance of ranking high as a desirable home port.

Fish Receivers: Although of less significance, fish receivers would be a convenience to fishermen. Already in use are live bait recivers which should be strategically located to the advantage of commercial, partyboat and recreational fishing boats. Crab and lobster fishermen would probably find receivers useful, as would aquaculture programs such as abalone and prawn. If sufficient interest is generated in receivers, additional effort could be expended in design, feasibility, costs, etc.

Multi-Purpose Building: A building complex designed to provide the fishermen a place to hold formal or informal meetings to discuss fishing or marketing problems would be well received. It could be anything from a simple two-room structure with restroom, shower and laundry facilities to whatever extremes one would wish to make of it. It might be maintained by the port authority or a local fishermen's association on a lease basis.

Pumpout Stations: Water pollution regulations prohibit the discharge of refuse or any polluting substance into coastal waters. Fishing vessels need appliances to discharge sewage and bilge wastes. These facilities are needed by all boats, not just commercial fishing vessels.

Fishermen also expressed a need for a dockside station to change engine oil.

Transient Facilities: Many commercial fishing vessels leave their homeport and travel long distances up or down the coastline to fish. These vessels need facilities on short-termed basis. Berthing can be slips, end-ties or moorings. Laundry, showers, restrooms, fuel, ice and all the other facilities are also needed. These fishermen need a nearness to restaurants, fishing supplies, and groceries since shoreside transportation is usually a problem. Transient fishermen contribute to the local economy in the same way as resident fishermen.

Aquaculture: Although aquaculture may seem out of context in this study, it has certain implications. There is no question that there is substantial interest and that it will represent a major portion of the seafood market in the future. Although aquaculture for select species is emminent, it is advancing slowly. Few financial supporters, high initial capital risk, environmental constraints, and legal barriers have all contributed to the slow advance of aquaculture.

A harbor facility could assist aquaculture by providing suitable receiving stations, as mentioned previously, or by providing space for experimental laboratories, docks, tanks, etc. The abalone industry already uses aquaculture techniques

to culture seed. This seed is carried to sea by divers and planted in exploited abalone beds. Suspended abalone culture cages are employed beneath offshore oil drilling platforms. Similar systems or techniques may soon apply to other fisheries such as lobster, shrimp and prawn.

CONCLUSIONS AND RECOMMENDATIONS

The coastal waters of the study area are rich in fishery resources, are blessed with a mild climate, benefit from the mixing of both warm and cold ocean currents just to the north and have a narrow, but highly productive continental shelf (Winsler and Kelly, 1977).

Commercial fish and shellfish landings are increasing in the study area with ready markets available for nearly every fishery. These markets are throughout the United States and overseas. Further development of fishery resources, markets, and port facilities will increase fishing activity in the waters of the study area. Commercial fishing facilities in the study area presently limit the quantity of fishery products landed in the four-port study area. The most serious deficit is permanent and transient vessel berths. Three harbors, Santa Barbara, Ventura and Oxnard are planning new facilities which will accommodate additional commercial fishing boats. Commercial landings should continue to increase provided adequate shoreside facilities are developed. These increased landings will come about through further development of certain fisheries and a change of homeport to the study area for many vessels.

The ports of Santa Barbara, Ventura and Oxnard each appear to offer promise for meeting the needs of the commercial fishing industry in the study area. Santa Barbara, like most California harbors, has a serious space problem. If additional space can be provided for commercial fishing boats, Santa Barbara would probably attract a considerable number of fishing vessels since some other facilities are already available. Ventura must provide berthing space as well as all other lacking facilities. If Ventura can provide berthing for commercial vessels and Santa Barbara cannot, Ventura will probably attract fishing vessels from Santa Barbara, Oxnard, San Pedro and other ports as well. A large number of albacore vessels could be attracted to the study area as a homeport. If Ventura was to become a hub of commercial fishing activity, the landings would either be trucked to Santa Barbara or Los Angeles for processing. However, there is a strong possibility that processing plants would be attracted to Ventura.

Although many variables effect the likelihood of any one California port attracting vessels from another or several other ports, there will be no general economic gain to the State of California. A port providing most of the needs identifed by this study and attracting a substantial number of commercial vessels from other ports would receive a boost to the "local" economy. Unless new fisheries are developed or existing fisheries are further developed, this economic gain would be at the expense of other ports.

Many facilities identified by this study should be included in any plans for developing harbors. The most imminent need is berthing space. Interviews with several fishermen and fishing associations provided enough information to allow the projection that 300 to 400 commercial fishing boats may be attracted to the study area in the next few years if these needed facilities are provided.

A clear delineation is needed before a plan can be designed to separate boating groups (commercial and recreational interests). This paper suggested considering both groups during planning stages and to guarantee certain facilities to each group.

Many areas requiring additional research have been revealed in this paper. More detailed information is needed on local economic benefits, costs of providing needed facilities and better identificiation of vessels to be attracted to the study region.

ACKNOWLEDGEMENTS

This study was possible only through the cooperation of the many fishermen, port and harbor directors, and seafood processors in the study area. Special thanks go to Herb Frey, California Fish and Game, Andrew T. Manus and Barbara Katz, California Marine Advisory Program, and Howard Ness, National Marine Fisheries Service for their assistance in editing and technical guidance. The authors also wish to thank Anne Davis for typing and proof reading the many drafts and final manuscript.

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FIELD SURVEYS AND MEETINGS WITH HARBOR ADMINISTRATORS AND FISHING INDUSTRY REPRESENTATIVES

2/28-3/1/78	Initial survey of the four harbors in the study area by J. Bybee and J. Richards.
5/24/78	Ventura Port District symposium on commercial fisheries facilities development. Attended by area fishermen, processors, coastal planners and resource managers.
7/19/78	Santa Barbara City Local Coastal Program (LCP) meeting on commercial fisheries berthing and facilities in Santa Barbara Harbor. Attended by area commercial fishermen and processors.
7/27/78	Santa Barbara Harbor facilities survey with Santa Barbara LCP Project Manager, and trawl fleet representative.
8/22/78	South Central Regional Coastal Commission meeting with commercial fishing industry representatives on the proposed expansion of Channel Islands Marina. Attended by Director of the Pacific Coast Federation of Fishermen's Assocations (PCFFA), Commercial Fishermen of Santa Barbara (CFSB), trawl fleet representatives and area processors.
9/18/78	Channel Islands Harbor commercial fisheries facilities and industry survey with Ken Lerner, South Central Regional Coastal Commission Planner. Interviewed members of Channel Islands Fishermen's Cooperative, fish processors, brokers and retailers.
10/7-10/18/78	Update of initial facilities survey in Santa Barbara, Ventura, Port Hueneme and Channel Islands Harbor by J. Bybee and J. Richards.
11/30/78	Santa Barbara Chamber of Commerce Harbor Committee meeting on commercial fishing industry needs and issues in Santa Barbara Harbor.
1/10/79	Ventura Harbor meeting to assess the fishing industry needs for berthing and harbor facilities. Attended by commercial fishing representatives from the CAA, UFO, CFSB, CIHFC, the trawl fleet and area processors

HARBOR FACILITIES SURVEY - COMMERCIAL FISHERMAN
SANTA BARBARA/VENTURA COUNTIES
UNIVERSITY OF CALIFORNIA MARINE ADVISORY PROGRAM
1978

1. HOW LONG HAVE YOU BEEN A COMMERCIAL FISHERMAN?
2. HOW LONG HAVE YOU FISHED THE CHANNEL ISLAND AREA?
3. WHERE DO YOU RESIDE?
4. WHAT DO YOU FISH FOR IN THIS AREA AND WHEN?

5. WHERE DO YOU?

BERTH (TYPE) _____	ICE UP _____
FUEL UP _____	BAIT UP _____
UNLOAD CATCH _____	REPAIR BOAT _____
REPAIR GEAR _____	PARK CAR _____
SELL CATCH _____	STORE GEAR _____

6. WHAT IS YOUR BOATS "BEAM" _____; "O/A LENGTH" _____; "DRAFT" _____
7. WHAT GEAR DO YOU USE; _____; HOW MANY? _____
8. WHAT ARE YOUR FUEL NEEDS? TYPE _____; QUANTITY _____; HOURS OF NEED _____; OTHER _____; _____
9. HOW MUCH STORAGE AREA DO YOU REQUIRE? _____
10. HOW MUCH WORK AREA DO YOU REQUIRE? _____
11. WHAT BERTH DO YOU PREFER? END-TIE _____; MOORING _____; PILE TIE _____
    SLIP _____; OTHER _____.
12. IF ALL 4 PORTS HAD EQUAL FACILITIES, WHICH WOULD YOU PREFER: 1ST _____
    2ND _____
13. DO YOU FEEL A TRUCK "WAITING AREA" IS NEEDED? _____
14. LIST YOUR MAIN INTERESTS IN NEW HARBOR/MARINA DEVELOPMENTS: (i.e., PARKING, LIGHT DECK ACCESS, GROCERIES, WORK AREA, ETC.) PLEASE IDENTIFY.
    1. _____
    2. _____
    3. _____
    4. _____
    5. _____
    6. _____

SEAFOOD PROCESSOR SURVEY
SANTA BARBARA/VENTURA COUNTY
UNIVERSITY OF CALIFORNIA
MARINE ADVISORY PROGRAM
1978

1. NAME OF INTERVIEWEE: _____
2. NAME OF FACILITY: _____
3. ADDRESS OF FACILITY: _____
4. FACILITY DISTANCE FROM HARBOR: _____
5. LIST SPECIES PROCESSED: _____; _____; _____
   _____; _____; _____; _____
6. SOURCES OF RAW PRODUCT (GEOGRAPHIC), DISTANCE:

7. VALUE OF PRODUCT BY SPECIES:

SPECIES	EXVESSEL	WHOLESALE	RETAIL

8. SPECIAL SERVICES OFFERED COMMERCIAL FISHERMEN (i.e., TRUCKS, ICE, ETC.)

9. IDENTIFY SPECIAL PROBLEMS YOU SEE THAT MIGHT BE CORRECTED OR MITIGATED THROUG PLANNED HARBOR OR MARINA DEVELOPMENT.

PORT FACILITY
SANTA BARBARA/VENTURA CO. SURVEY
UNIVERSITY OF CALIFORNIA MARINE ADVISORY PROGRAM
1978

LEASE DESCRIBE ACILITIES	NUMBER	OWNERSHIP	SUPPLY AVAILABLE	HOURS OF OPERATION	MAXIMUM CAPACITY	COSTS TO FISHERMEN		
FUEL.....								
ICE.....								
HAUL OUT.....								
WASTE DISPOSAL								
HOISTS.....								
BAIT.....								
RESTROOMS.....								
SHOWERS.....								
WEIGHT SCALES..								
ENGINE SERVICE								

LEASE IDENTIFY ERTH FACILITIES	NUMBER FACILITIES	SIZE RANGE	NUMBER BOATS	LOCATION	NUMBER MOORINGS	SLIPS	END-TIES	PILE-TIES	OTHER
COMMERCIAL FISHING BOAT									
PARTY BOAT.....									
PLEASURE BOAT.....									
COMMERCIAL (OTHER).....									
TRANSIENT BOAT.....									
FUTURE FACILITIES PLANNED									
RAFTING AREAS.....									

OW MANY DAYS WAS THE HARBOR ENTRANCE UNPASSABLE FOR BOAT TRAFFIC? _____

OW IS HARBOR ENTRANCE MAINTAINED? _____ FREQUENCY _____

AT IS THE HARBOR DEPTHS? HIGH TIDE _____; LOW TIDE _____

; THERE A TURNING BASIN? _____

) THE BERTHS HAVE: FRESHWATER _____; ELEC POWER _____; PARKING _____; DRY STORAGE _____:

SEWAGE DISPOSAL _____.

OLD SANTA BARBARA FISH CO. INC.
214 STATE STREET
SANTA BARBARA, CALIFORNIA 93101
(805) 965-0365

November 19, 1978

Mr. Jim Bybee
National Marine Fisheries Service
300 South Ferry Street, Room 2016
Terminal Island, Calif. 90731

Dear Mr. Bybee,

In response to your questions on the need for additional commercial fisheries facilities in the Santa Barbara, Ventura area, I would like to tell you about our personal experiences with the "harbor squeeze" in Santa Barbara Harbor.

We have been in operation for nearly four years, employing between 25 and 50 workers in our fish processing facility. We handle most of the traditional species (halibut, sole, rock cod, sea bass, etc) and have developed new markets for many under-utilized species such as dog fish shark, black cod, angel shark, skates and blue shark. Several of these species were exported to Japan, Singapore, Taiwan and Korea. Because we could buy these fish, many of the Santa Barbara fishermen could continue to operate during periods when the traditional species were out of season or unavailable.

We regularly bought fish from 12 to 15 local boats and depended heavily on transient vessels from both northern and southern ports to fill the great local demand for fish. In January of this year the fees for transient vessels were raised to a point considered excessive by most of the transient fleet, especially the smaller halibut and hook and line fishing vessels. We lost at least 11 halibut boats, several black cod boats, a dragger and a number of hook and line boats. The following is a list of vessels that left the Santa Barbara area because of the lack of berthing, high transient fees or the antagonistic attitude of harbor personnel toward commercial fishermen:

Vessel	Length	Type of fishery
"Galveston"	60 feet	Bottom fish
"Horizon"	45 feet	Black Cod
"Little Godfather"	36 feet	Trammel
"Little Joseph"	35 feet	"
"Maria Fatima"	36 feet	"
"New Home IV"	40 feet	"
"Santa Lucia II"	36 feet	"
"Santa Fortunata"	36 feet	"
"Tom & Jerry"	38 feet	"
"Uncle Frank"	38 feet	"
"Vito Boy"	36 feet	"
"Patience"	65 feet	Squid - Hook & Lin
"Producer"	74 feet	Black cod
"Stacy Ann"	65 feet	Black Cod
"Sunshine Lady"	47 feet	Hook & Line
"Pacific Husky"	28 feet	Hook & Line
"Robby Lin"	34 feet	Hook & Line
"Jana Dawn"	65 feet	Trawl

Most of these fishermen indicated that they would have liked to continue fishing in thes area for both traditional and under-utilized species.

Because of this loss of producers and the subsequent barring of several large black cod vessels from the harbor in September, we decided the future for our business looked bleak and we ceased operation.

If there had been adequate commercial facilities in Ventura Harbor, Channel Islands Harbor or Port Hueneme, we may still have been in business today, as the transients could have relocated to one of these harbors and we could have trucked the fish to Santa Barbara.

I hope that you can see from our experience the importance of berthing and commercial fisheries facilities to the area. We can not hope to be anything but a 10th. rate fishing nation or take advantage of our new 200 mile fisheries zone, if we continue to have a lack of harbor facilities for the commercial fishing industry.

Your truly,

Mrs Al Ellis

(Mrs.) Al Ellis
Corporate Secretary

Common Name	Scientific Name
Abalone	Haliotis sp.
Abalone, black	Haliotis cracherodii
Anchovy	Engraulis mordax
Barracuda	Sphyraena argentea
Bonito	Sarda chiliensis
Crab, pelagic	Pleuroncodes planipes
Crab, rock	Cancer sp.
Hake	Merluccius productus
Halibut, California	Paralichthys californicus
Lanternfish	Myctophidae
Lobster, spiny	Panulirus interruptus
Mackerel, jack	Trachurus symmetricus
Prawn, ridgeback	Eusicyonia ingentus
Prawn, spot	Pandalus platyceros
Rockfish	Sebastes sp.
Sablefish	Anoplopoma fimbria
Salmon	Oncorhynchus sp.
Sardine	Sardinops sagax
Saury	Cololabis saira
Sea bass	Cynoscion nobilis
Sea cucumber	Holothuroidea
Sea snail	Kelletia kelletia
Sea urchin	Strongylocentrotus franciscanus
Shark, blue	Prionace glauca
Shark, dogfish	Squalus acanthias
Shark, leopard	Triakis semifaciata
Shark, soupfin	Galeorhinus zyopterus
Shark, thresher	Alopias superciliosus
Smelt	Gonostomatidae
Sole, dover	Microstomus pacificus
Sole, English	Parophrys vetulus
Sole, petrale	Eopsetta jordani
Sole, rex	Glyptocephalus zachirus
Squid	Loligo opalescens
Swordfish	Xiphias gladius
Tuna, albacore	Thunnus alalunga
Tuna, bluefin	Thunnus thynnus
Turbot	Pleuronichthys sp.